REMARKS

This amendment is filed in response to the Office Action dated November 20, 2006. In view of this amendment, this application should be allowed and the case passed to issue.

No new matter is introduced by this amendment. The amendment to claim 11 is supported by claim 1. The specification is amended to correct informalities.

Claims 1-20 are pending in this application. Claims 1-20 are rejected. Claim 11 is amended in this response.

Claim Rejections Under 35 U.S.C. § 102

Claims 1-8, 11-14, and 18-20 were rejected under 35 U.S.C. § 102(e) as being anticipated by Hartig (U.S. Pat. Pub. No. 2004/0118678). This rejection is traversed, and reconsideration and withdrawal thereof respectfully requested. The following is a comparison between the present invention, as claimed, and the cited prior art.

An aspect of this invention, per claim 1, is an apparatus adapted for treating or processing at least one substrate/workpiece in a plasma comprising a chamber defining an interior space and means for generating a plasma in the interior space of the chamber. Mounting means are adapted for positioning at least one substrate/workpiece in the interior space of the chamber for receiving treatment in the plasma. A gas supply means injects gas(es) into the interior space of the chamber comprising an inlet portion extending exteriorly of the chamber, an outlet portion extending into the chamber and including at least one outlet orifice for injecting gas(es) into the interior space, and means for applying a bias potential to the gas supply means for suppressing plasma formation at the at least one outlet orifice.

Another aspect of the invention, per claim 11, is a method of treating or processing at least one substrate/workpiece in a plasma comprising steps of providing an apparatus comprising

a chamber defining an interior space and including means for generating a plasma within the interior space. At least one substrate/workpiece is mounted or positioned in the interior space of the chamber. Gas(es) are injected into the interior space of the chamber by means of an electrically isolated gas supply means having at least one outlet orifice. A plasma is generated in the interior space of the chamber via the means for generating a plasma. A bias potential is applied to the gas supply means to suppress plasma formation at the at least one outlet orifice, and the at least one substrate/workpiece is treated or processed in the plasma.

The Examiner asserted that Hartig teaches an apparatus adapted for treating or processing at least one substrate/workpiece in a plasma. The Examiner averred that Hartig discloses a chamber 12, means for generating a plasma 16, gas supply means 18, and means for suppressing plasma formation at the at least one outlet surface.

Hartig does not anticipate the claimed apparatus adapted for treating or processing at least one substrate/workpiece in a plasma and method of treating or processing at least one substrate/workpiece in a plasma. Hartig does not disclose a means for generating a plasma in the interior space of the chamber and means for applying a bias potential to the gas supply means, as required by claim 1; and does not disclose generating a plasma in the interior space of the chamber via the means for generating a plasma and applying a bias potential to the gas supply means to suppress plasma formation at the at least one outlet orifice, as required by claim 11.

As disclosed in the present specification, the present invention suppresses the premature ionization of inert gases (plasma formation), the erosion of the gas delivery system, and the creation of the decomposed species adjacent the gas delivery system (page 10, lines 4-26). Hartig, on the other hand, is not directed towards suppressing plasma formation at the gas orifice. Claim 1 requires distinct means for generating a plasma and means for applying a bias potential.

The Examiner, however, has relied on the same feature in Hartig as both the asserted means for generating a plasma and means for applying a bias potential. Hartig does not disclose distinct means for generating a plasma and means for applying a bias potential, as required by claim 1. The means for generating a bias potential, according to the present invention, suppresses plasma formation at the at least one outlet orifice. Whereas, the asserted Hartig means for applying a bias potential **is the means for generating a plasma**. Thus, the Examiner-asserted Hartig means for applying a bias potential does not **suppress plasma formation** as required by claims 1 and 11.

The factual determination of lack of novelty under 35 U.S.C. § 102 requires the disclosure in a single reference of each element of a claimed invention. *Helifix Ltd. v. Blok-Lok Ltd.*, 208 F.3d 1339, 54 USPQ2d 1299 (Fed. Cir. 2000); *Electro Medical Systems S.A. v. Cooper Life Sciences, Inc.*, 34 F.3d 1048, 32 USPQ2d 1017 (Fed. Cir. 1994); *Hoover Group, Inc. v. Custom Metalcraft, Inc.*, 66 F.3d 399, 36 USPQ2d 1101 (Fed. Cir. 1995); *Minnesota Mining & Manufacturing Co. v. Johnson & Johnson Orthopaedics, Inc.*, 976 F.2d 1559, 24 USPQ2d 1321 (Fed. Cir. 1992); *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051 (Fed. Cir. 1987). Because Hartig does not disclose a means for generating a plasma in the interior space of the chamber and means for applying a bias potential to the gas supply means, as required by claim 1; and does not disclose generating a plasma in the interior space of the chamber via the means for generating a plasma and applying a bias potential to the gas supply means to suppress plasma formation at the at least one outlet orifice, as required by claim 11, Hartig does not anticipate claims 1 and 11.

Applicant further submits that Hartig does not suggest the claimed apparatus adapted for treating or processing at least one substrate/workpiece in a plasma and method of treating or processing at least one substrate/workpiece in a plasma.

Claim Rejections Under 35 U.S.C. § 103

Claims 9, 10, 15, and 16 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Hartig in view of Zejda (U.S. Pat. No. 5,228,968). This rejection is traversed, and reconsideration and withdrawal thereof respectfully requested.

The Examiner acknowledged that Hartig does not disclose the claimed spaced-apart pair of cathode/target assemblies, mounting means, and gas supply means. The Examiner relied on the teachings of Zejda to provide these elements and asserted that it would have been obvious to combine Zejda with Hartig.

The combination of Hartig and Zejda, however, does not suggest the claimed apparatus and method because Zejda does not cure the deficiencies of Hartig. Zejda does not suggest a means for generating a plasma in the interior space of the chamber and means for applying a bias potential to the gas supply means, as required by claim 1; and does not disclose generating a plasma in the interior space of the chamber via the means for generating a plasma and applying a bias potential to the gas supply means to suppress plasma formation at the at least one outlet orifice, as required by claim 11.

Claim 17 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Hartig in view of Zejda and further in view of Suzuki et al. (U.S. Pat. No. 6,627,253). This rejection is traversed, and reconsideration and withdrawal thereof respectfully requested.

The Examiner acknowledged that Hartig and Zejda do not disclose the claimed reactive sputtering of a ferromagnetic target material in an oxygen-containing plasma. The Examiner

relied on the teachings of Suzuki et al. to provide this step and asserted that it would have been obvious to combine Suzuki et al. with Zejda and Hartig.

The combination of Suzuki et al. with Hartig and Zejda, however, does not suggest the claimed apparatus and method because Suzuki et al. do not cure the deficiencies of Hartig and Zejda. Suzuki et al. do not suggest a means for generating a plasma in the interior space of the chamber and means for applying a bias potential to the gas supply means, as required by claim 1; and do not disclose generating a plasma in the interior space of the chamber via the means for generating a plasma and applying a bias potential to the gas supply means to suppress plasma formation at the at least one outlet orifice, as required by claim 11.

The dependent claims are allowable for at least the same reasons as the independent claims from which they depend and further distinguish the claimed apparatus and method.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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